

ANALYTICAL RESULTS

Prepared for:

Langan
500 Hyde Park
Doylestown PA 18901

215-348-7101

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425**SAMPLE GROUP**

The sample group for this submittal is 944981. Samples arrived at the laboratory on Wednesday, May 25, 2005. The PO# for this group is SUNOCO PHILLY REFINER.

Client Description**Lancaster Labs Number**

B126-052405 Grab Water Sample	4532019
B125-052405 Grab Water Sample	4532020
B134D-052405 Grab Water Sample	4532021
B131-052405 Grab Water Sample	4532022
B117-052405 Grab Water Sample	4532023
B115-052405 Grab Water Sample	4532024
B116-052405 Grab Water Sample	4532025
B48D-052405 Grab Water Sample	4532026
B48-052405 Grab Water Sample	4532027
Trip Blank Water Sample	4532028

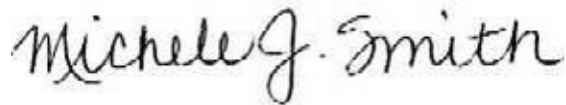
ELECTRONIC SUN: Aquaterra Tech.
COPY TO
1 COPY TO LL
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ELECTRONIC Langan
COPY TO

Attn: Brad Spancake

Attn: Angela Miller
Attn: Jason Hanna
Attn: Dennis Webster

Questions? Contact your Client Services Representative
Angela M Miller at (717) 656-2300

Respectfully Submitted,



Michele J. Smith
Group Leader

Lancaster Laboratories Sample No. WW 4532019

B126-052405 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 05/24/2005 12:50 by MBS

Account Number: 10132

Submitted: 05/25/2005 17:20
 Reported: 06/17/2005 at 12:14
 Discard: 07/18/2005

Langan
 500 Hyde Park
 Doylestown PA 18901

B126-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	< 0.0010	0.0010	0.00018	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide	106-93-4	< 0.029	0.029	0.0096	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	< 10.	10.	1.	ug/l	1
03956	Fluorene	86-73-7	12.	10.	1.	ug/l	1
03963	Phenanthrene	85-01-8	< 10.	10.	1.	ug/l	1
03967	Pyrene	129-00-0	< 10.	10.	1.	ug/l	1
03971	Chrysene	218-01-9	< 10.	10.	1.	ug/l	1

The recovery of the GC/MS semivolatile surrogate standard terphenyl-d14 is above recovery limits in this sample due to a bias between the calibration standard and the standard used as the surrogate spiking solution. As per NELAC requirements and good laboratory practice, the source of terphenyl-d14 in the calibration standards and the source of terphenyl-d14 in the surrogate spiking solution are from different vendors. This sample was extracted and analyzed at a time when the difference in responses between these two sources exceeded what is accounted for by the use of statistical windows.

Steps have been taken to replace the lots of standard that were in use during the analysis of this sample. The high recovery for terphenyl-d14 in this sample is consistent with the response difference between the two sources of terphenyl-d14 and is not an indication of a sample matrix bias.

02302 UST-Waters by 8260B

02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	200.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	50.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	19.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	26.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	87.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
 This sample was filtered in the lab for dissolved metals.

*=This limit was used in the evaluation of the final result

Lancaster Laboratories Sample No. WW 4532019

B126-052405 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 05/24/2005 12:50 by MBS

Account Number: 10132

Submitted: 05/25/2005 17:20
 Reported: 06/17/2005 at 12:14
 Discard: 07/18/2005

Langan
 500 Hyde Park
 Doylestown PA 18901

B126-

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
06035	Lead	SW-846 6020	1	06/13/2005 17:04	David K Beck	1
07879	EDB in Wastewater	SW-846 8011	1	06/02/2005 01:35	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	05/31/2005 01:50	Linda M Hartenstine	1
02302	UST-Waters by 8260B	SW-846 8260B	1	06/01/2005 02:52	Anastasia Papadoplos	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/01/2005 02:52	Anastasia Papadoplos	n.a.
06050	ICP/MS SW-846 Water	SW-846 3010A Mod.	1	06/05/2005 21:00	James L Mertz	1
07786	EDB Extraction	SW-846 8011	1	05/26/2005 18:00	Amanda W Herr	1
07807	BNA Water Extraction	SW-846 3510C	1	05/28/2005 15:45	David V Hershey Jr	1

Lancaster Laboratories Sample No. WW 4532020

B125-052405 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 05/24/2005 13:10 by MBS

Account Number: 10132

Submitted: 05/25/2005 17:20
Reported: 06/17/2005 at 12:14
Discard: 07/18/2005

Langan
500 Hyde Park
Doylestown PA 18901

B125-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	< 0.0010	0.0010	0.00018	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide The surrogate data is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction so all results are reported from the original extract. Similar results were obtained in both extracts.	106-93-4	< 0.029	0.029	0.0097	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	< 10.	10.	1.	ug/l	1
03956	Fluorene	86-73-7	15.	10.	1.	ug/l	1
03963	Phenanthrene	85-01-8	< 10.	10.	1.	ug/l	1
03967	Pyrene	129-00-0	< 10.	10.	1.	ug/l	1
03971	Chrysene	218-01-9	< 10.	10.	1.	ug/l	1
02302	UST-Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	66.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	75.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	10.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	7.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	78.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	06/13/2005 17:08	David K Beck	1
07879	EDB in Wastewater	SW-846 8011	1	06/02/2005 02:05	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	05/31/2005 02:12	Linda M Hartenstine	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories Sample No. WW 4532020**B125-052405 Grab Water Sample****SUN: Philadelphia Refinery AOI-6**

Collected: 05/24/2005 13:10 by MBS

Account Number: 10132

Submitted: 05/25/2005 17:20

Langan

Reported: 06/17/2005 at 12:14

500 Hyde Park

Discard: 07/18/2005

Doylestown PA 18901

B125-

02302	UST-Waters by 8260B	SW-846 8260B	1	06/01/2005 03:19	Anastasia Papadopoulos	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/01/2005 03:19	Anastasia Papadopoulos	n.a.
06050	ICP/MS SW-846 Water	SW-846 3010A Mod.	1	06/05/2005 21:00	James L Mertz	1
07786	EDB Extraction	SW-846 8011	1	05/26/2005 18:00	Amanda W Herr	1
07807	BNA Water Extraction	SW-846 3510C	1	05/28/2005 15:45	David V Hershey Jr	1

Lancaster Laboratories Sample No. WW 4532021

B134D-052405 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 05/24/2005 13:30 by MBS

Account Number: 10132

Submitted: 05/25/2005 17:20
Reported: 06/17/2005 at 12:14
Discard: 07/18/2005

Langan
500 Hyde Park
Doylestown PA 18901

B134D

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	< 0.0010	0.0010	0.00018	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide	106-93-4	< 0.029	0.029	0.0096	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	< 10.	10.	1.	ug/l	1
03956	Fluorene	86-73-7	< 10.	10.	1.	ug/l	1
03963	Phenanthrene	85-01-8	< 10.	10.	1.	ug/l	1
03967	Pyrene	129-00-0	< 10.	10.	1.	ug/l	1
03971	Chrysene	218-01-9	< 10.	10.	1.	ug/l	1

The recovery of the GC/MS semivolatile surrogate standard terphenyl-d14 is above recovery limits in this sample due to a bias between the calibration standard and the standard used as the surrogate spiking solution. As per NELAC requirements and good laboratory practice, the source of terphenyl-d14 in the calibration standards and the source of terphenyl-d14 in the surrogate spiking solution are from different vendors. This sample was extracted and analyzed at a time when the difference in responses between these two sources exceeded what is accounted for by the use of statistical windows.

Steps have been taken to replace the lots of standard that were in use during the analysis of this sample. The high recovery for terphenyl-d14 in this sample is consistent with the response difference between the two sources of terphenyl-d14 and is not an indication of a sample matrix bias.

02302 UST-Waters by 8260B

02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	< 5.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	< 5.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	< 5.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	< 5.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 5.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

*=This limit was used in the evaluation of the final result

Lancaster Laboratories Sample No. WW 4532021

B134D-052405 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 05/24/2005 13:30 by MBS

Account Number: 10132

Submitted: 05/25/2005 17:20
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 Discard: 07/18/2005

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 500 Hyde Park
 Doylestown PA 18901

B134D

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
06035	Lead	SW-846 6020	1	06/13/2005 17:12	David K Beck	1
07879	EDB in Wastewater	SW-846 8011	1	06/02/2005 02:35	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	05/31/2005 02:33	Linda M Hartenstine	1
02302	UST-Waters by 8260B	SW-846 8260B	1	06/01/2005 03:43	Anastasia Papadoplos	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/01/2005 03:43	Anastasia Papadoplos	n.a.
06050	ICP/MS SW-846 Water	SW-846 3010A Mod.	1	06/05/2005 21:00	James L Mertz	1
07786	EDB Extraction	SW-846 8011	1	05/26/2005 18:00	Amanda W Herr	1
07807	BNA Water Extraction	SW-846 3510C	1	05/28/2005 15:45	David V Hershey Jr	1

Lancaster Laboratories Sample No. WW 4532022

B131-052405 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 05/24/2005 13:45 by MBS

Account Number: 10132

Submitted: 05/25/2005 17:20
Reported: 06/17/2005 at 12:14
Discard: 07/18/2005

Langan
500 Hyde Park
Doylestown PA 18901

B131-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	< 0.0010	0.0010	0.00018	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide	106-93-4	< 0.029	0.029	0.0096	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	< 10.	10.	1.	ug/l	1
03956	Fluorene	86-73-7	< 10.	10.	1.	ug/l	1
03963	Phenanthrene	85-01-8	< 10.	10.	1.	ug/l	1
03967	Pyrene	129-00-0	< 10.	10.	1.	ug/l	1
03971	Chrysene	218-01-9	< 10.	10.	1.	ug/l	1

The recovery of the GC/MS semivolatile surrogate standard terphenyl-d14 is above recovery limits in this sample due to a bias between the calibration standard and the standard used as the surrogate spiking solution. As per NELAC requirements and good laboratory practice, the source of terphenyl-d14 in the calibration standards and the source of terphenyl-d14 in the surrogate spiking solution are from different vendors. This sample was extracted and analyzed at a time when the difference in responses between these two sources exceeded what is accounted for by the use of statistical windows.

Steps have been taken to replace the lots of standard that were in use during the analysis of this sample. The high recovery for terphenyl-d14 in this sample is consistent with the response difference between the two sources of terphenyl-d14 and is not an indication of a sample matrix bias.

02302 UST-Waters by 8260B

02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	20.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	< 5.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	< 5.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	13.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 5.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

*=This limit was used in the evaluation of the final result

Lancaster Laboratories Sample No. WW 4532022

B131-052405 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 05/24/2005 13:45 by MBS

Account Number: 10132

Submitted: 05/25/2005 17:20
 Reported: 06/17/2005 at 12:14
 Discard: 07/18/2005

Langan
 500 Hyde Park
 Doylestown PA 18901

B131-

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
06035	Lead	SW-846 6020	1	06/13/2005 17:15	David K Beck	1
07879	EDB in Wastewater	SW-846 8011	1	06/02/2005 03:05	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	05/31/2005 02:54	Linda M Hartenstine	1
02302	UST-Waters by 8260B	SW-846 8260B	1	06/01/2005 04:07	Anastasia Papadoplos	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/01/2005 04:07	Anastasia Papadoplos	n.a.
06050	ICP/MS SW-846 Water	SW-846 3010A Mod.	1	06/05/2005 21:00	James L Mertz	1
07786	EDB Extraction	SW-846 8011	1	05/26/2005 18:00	Amanda W Herr	1
07807	BNA Water Extraction	SW-846 3510C	1	05/28/2005 15:45	David V Hershey Jr	1

Lancaster Laboratories Sample No. WW 4532023

B117-052405 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 05/24/2005 14:05 by MBS

Account Number: 10132

Submitted: 05/25/2005 17:20
Reported: 06/17/2005 at 12:14
Discard: 07/18/2005

Langan
500 Hyde Park
Doylestown PA 18901

B117-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	< 0.0010	0.0010	0.00018	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide	106-93-4	< 0.029	0.029	0.0096	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	< 10.	10.	1.	ug/l	1
03956	Fluorene	86-73-7	< 10.	10.	1.	ug/l	1
03963	Phenanthrene	85-01-8	< 10.	10.	1.	ug/l	1
03967	Pyrene	129-00-0	< 10.	10.	1.	ug/l	1
03971	Chrysene	218-01-9	< 10.	10.	1.	ug/l	1
02302	UST-Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	< 5.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	< 5.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	< 5.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	< 5.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 5.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	06/13/2005 17:19	David K Beck	1
07879	EDB in Wastewater	SW-846 8011	1	06/02/2005 03:35	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	05/31/2005 03:16	Linda M Hartenstine	1
02302	UST-Waters by 8260B	SW-846 8260B	1	06/01/2005 04:31	Anastasia Papadopoulos	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/01/2005 04:31	Anastasia Papadopoulos	n.a.
06050	ICP/MS SW-846 Water	SW-846 3010A Mod.	1	06/05/2005 21:00	James L Mertz	1
07786	EDB Extraction	SW-846 8011	1	05/26/2005 18:00	Amanda W Herr	1
07807	BNA Water Extraction	SW-846 3510C	1	05/28/2005 15:45	David V Hershey Jr	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories Sample No. WW 4532023

B117-052405 Grab Water Sample

SUN: Philadelphia Refinery AOI-6

Collected: 05/24/2005 14:05 by MBS

Account Number: 10132

Submitted: 05/25/2005 17:20

Langan

Reported: 06/17/2005 at 12:14

500 Hyde Park

Discard: 07/18/2005

Doylestown PA 18901

B117-

Lancaster Laboratories Sample No. WW 4532024

B115-052405 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 05/24/2005 14:20 by MBS

Account Number: 10132

Submitted: 05/25/2005 17:20
Reported: 06/17/2005 at 12:14
Discard: 07/18/2005

Langan
500 Hyde Park
Doylestown PA 18901

B115-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	< 0.0010	0.0010	0.00018	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide	106-93-4	< 0.029	0.029	0.0097	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	< 10.	10.	1.	ug/l	1
03956	Fluorene	86-73-7	< 10.	10.	1.	ug/l	1
03963	Phenanthrene	85-01-8	< 10.	10.	1.	ug/l	1
03967	Pyrene	129-00-0	< 10.	10.	1.	ug/l	1
03971	Chrysene	218-01-9	< 10.	10.	1.	ug/l	1

The recovery of the GC/MS semivolatile surrogate standard terphenyl-d14 is above recovery limits in this sample due to a bias between the calibration standard and the standard used as the surrogate spiking solution. As per NELAC requirements and good laboratory practice, the source of terphenyl-d14 in the calibration standards and the source of terphenyl-d14 in the surrogate spiking solution are from different vendors. This sample was extracted and analyzed at a time when the difference in responses between these two sources exceeded what is accounted for by the use of statistical windows.

Steps have been taken to replace the lots of standard that were in use during the analysis of this sample. The high recovery for terphenyl-d14 in this sample is consistent with the response difference between the two sources of terphenyl-d14 and is not an indication of a sample matrix bias.

02302 UST-Waters by 8260B

02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	< 5.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	< 5.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	< 5.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	< 5.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 5.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

*=This limit was used in the evaluation of the final result

Lancaster Laboratories Sample No. WW 4532024

B115-052405 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 05/24/2005 14:20 by MBS

Account Number: 10132

Submitted: 05/25/2005 17:20
 Reported: 06/17/2005 at 12:14
 Discard: 07/18/2005

Langan
 500 Hyde Park
 Doylestown PA 18901

B115-

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
06035	Lead	SW-846 6020	1	06/13/2005 17:23	David K Beck	1
07879	EDB in Wastewater	SW-846 8011	1	06/02/2005 04:04	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	05/31/2005 03:37	Linda M Hartenstine	1
02302	UST-Waters by 8260B	SW-846 8260B	1	06/01/2005 04:54	Anastasia Papadoplos	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/01/2005 04:54	Anastasia Papadoplos	n.a.
06050	ICP/MS SW-846 Water	SW-846 3010A Mod.	1	06/05/2005 21:00	James L Mertz	1
07786	EDB Extraction	SW-846 8011	1	05/26/2005 18:00	Amanda W Herr	1
07807	BNA Water Extraction	SW-846 3510C	1	05/28/2005 15:45	David V Hershey Jr	1

Lancaster Laboratories Sample No. WW 4532025

B116-052405 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 05/24/2005 14:35 by MBS

Account Number: 10132

Submitted: 05/25/2005 17:20
Reported: 06/17/2005 at 12:14
Discard: 07/18/2005

Langan
500 Hyde Park
Doylestown PA 18901

B116-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	< 0.0010	0.0010	0.00018	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide	106-93-4	< 0.029	0.029	0.0097	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	< 10.	10.	1.	ug/l	1
03956	Fluorene	86-73-7	< 10.	10.	1.	ug/l	1
03963	Phenanthrene	85-01-8	< 10.	10.	1.	ug/l	1
03967	Pyrene	129-00-0	< 10.	10.	1.	ug/l	1
03971	Chrysene	218-01-9	< 10.	10.	1.	ug/l	1

The recovery of the GC/MS semivolatile surrogate standard terphenyl-d14 is above recovery limits in this sample due to a bias between the calibration standard and the standard used as the surrogate spiking solution. As per NELAC requirements and good laboratory practice, the source of terphenyl-d14 in the calibration standards and the source of terphenyl-d14 in the surrogate spiking solution are from different vendors. This sample was extracted and analyzed at a time when the difference in responses between these two sources exceeded what is accounted for by the use of statistical windows.

Steps have been taken to replace the lots of standard that were in use during the analysis of this sample. The high recovery for terphenyl-d14 in this sample is consistent with the response difference between the two sources of terphenyl-d14 and is not an indication of a sample matrix bias.

02302 UST-Waters by 8260B

02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	< 5.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	< 5.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	< 5.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	< 5.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 5.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

*=This limit was used in the evaluation of the final result

Lancaster Laboratories Sample No. WW 4532025

B116-052405 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 05/24/2005 14:35 by MBS

Account Number: 10132

Submitted: 05/25/2005 17:20
 Reported: 06/17/2005 at 12:14
 Discard: 07/18/2005

Langan
 500 Hyde Park
 Doylestown PA 18901

B116-

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
06035	Lead	SW-846 6020	1	06/13/2005 17:34	David K Beck	1
07879	EDB in Wastewater	SW-846 8011	1	06/02/2005 04:34	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	05/31/2005 03:58	Linda M Hartenstine	1
02302	UST-Waters by 8260B	SW-846 8260B	1	06/01/2005 05:19	Anastasia Papadoplos	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/01/2005 05:19	Anastasia Papadoplos	n.a.
06050	ICP/MS SW-846 Water	SW-846 3010A Mod.	1	06/05/2005 21:00	James L Mertz	1
07786	EDB Extraction	SW-846 8011	1	05/26/2005 18:00	Amanda W Herr	1
07807	BNA Water Extraction	SW-846 3510C	1	05/28/2005 15:45	David V Hershey Jr	1

Lancaster Laboratories Sample No. WW 4532026

B48D-052405 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 05/24/2005 14:45 by MBS

Account Number: 10132

Submitted: 05/25/2005 17:20
Reported: 06/17/2005 at 12:14
Discard: 07/18/2005

Langan
500 Hyde Park
Doylestown PA 18901

B48D-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	< 0.0010	0.0010	0.00018	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide	106-93-4	< 0.029	0.029	0.0096	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	< 10.	10.	1.	ug/l	1
03956	Fluorene	86-73-7	< 10.	10.	1.	ug/l	1
03963	Phenanthrene	85-01-8	< 10.	10.	1.	ug/l	1
03967	Pyrene	129-00-0	< 10.	10.	1.	ug/l	1
03971	Chrysene	218-01-9	< 10.	10.	1.	ug/l	1
02302	UST-Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	< 5.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	< 5.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	< 5.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	< 5.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 5.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
06035	Lead	SW-846 6020	1	06/13/2005 17:38	David K Beck	1
07879	EDB in Wastewater	SW-846 8011	1	06/02/2005 05:33	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	05/31/2005 04:20	Linda M Hartenstine	1
02302	UST-Waters by 8260B	SW-846 8260B	1	06/01/2005 05:43	Anastasia Papadopoulos	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/01/2005 05:43	Anastasia Papadopoulos	n.a.
06050	ICP/MS SW-846 Water	SW-846 3010A Mod.	1	06/05/2005 21:00	James L Mertz	1
07786	EDB Extraction	SW-846 8011	1	05/26/2005 18:00	Amanda W Herr	1
07807	BNA Water Extraction	SW-846 3510C	1	05/28/2005 15:45	David V Hershey Jr	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories Sample No. WW 4532026

B48D-052405 Grab Water Sample

SUN: Philadelphia Refinery AOI-6

Collected: 05/24/2005 14:45 by MBS

Account Number: 10132

Submitted: 05/25/2005 17:20

Langan

Reported: 06/17/2005 at 12:14

500 Hyde Park

Discard: 07/18/2005

Doylestown PA 18901

B48D-

Lancaster Laboratories Sample No. WW 4532027

B48-052405 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 05/24/2005 15:00 by MBS

Account Number: 10132

Submitted: 05/25/2005 17:20
Reported: 06/17/2005 at 12:14
Discard: 07/18/2005

Langan
500 Hyde Park
Doylestown PA 18901

B48--

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	< 0.0010	0.0010	0.00018	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide	106-93-4	< 0.029	0.029	0.0098	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	< 10.	10.	1.	ug/l	1
03956	Fluorene	86-73-7	< 10.	10.	1.	ug/l	1
03963	Phenanthrene	85-01-8	< 10.	10.	1.	ug/l	1
03967	Pyrene	129-00-0	< 10.	10.	1.	ug/l	1
03971	Chrysene	218-01-9	< 10.	10.	1.	ug/l	1
02302	UST-Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	< 5.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	< 5.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	< 5.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	< 5.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 5.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
06035	Lead	SW-846 6020	1	06/13/2005 17:42	David K Beck	1
07879	EDB in Wastewater	SW-846 8011	1	06/02/2005 06:03	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	05/31/2005 04:41	Linda M Hartenstine	1
02302	UST-Waters by 8260B	SW-846 8260B	1	06/01/2005 06:06	Anastasia Papadopoulos	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/01/2005 06:06	Anastasia Papadopoulos	n.a.
06050	ICP/MS SW-846 Water	SW-846 3010A Mod.	1	06/05/2005 21:00	James L Mertz	1
07786	EDB Extraction	SW-846 8011	1	05/26/2005 18:00	Amanda W Herr	1
07807	BNA Water Extraction	SW-846 3510C	1	05/28/2005 15:45	David V Hershey Jr	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories Sample No. WW 4532027

B48-052405 Grab Water Sample

SUN: Philadelphia Refinery AOI-6

Collected: 05/24/2005 15:00 by MBS

Account Number: 10132

Submitted: 05/25/2005 17:20

Langan

Reported: 06/17/2005 at 12:14

500 Hyde Park

Discard: 07/18/2005

Doylestown PA 18901

B48--

Lancaster Laboratories Sample No. WW 4532028

Trip Blank Water Sample

SUN: Philadelphia Refinery AOI-6

Collected: n.a.

Account Number: 10132

Submitted: 05/25/2005 17:20

Reported: 06/17/2005 at 12:14

Discard: 07/18/2005

Langan

500 Hyde Park

Doylestown PA 18901

--TB--

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
02302	UST-Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	< 5.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	< 5.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	< 5.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	< 5.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 5.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02302	UST-Waters by 8260B	SW-846 8260B	1	05/29/2005 18:49	Lauren C Marzario	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	05/29/2005 18:49	Lauren C Marzario	n.a.

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Langan

Group Number: 944981

Reported: 06/17/05 at 12:14 PM

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank LOQ**</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 051460007A Ethylene dibromide	Sample number(s): 4532019-4532027 < 0.030	0.030	0.010	ug/l	96	79	60-140	19	20
Batch number: 05147WAD026 Naphthalene	Sample number(s): 4532019-4532027 < 10.	10.	1.	ug/l	88	86	58-108	2	30
Fluorene	< 10.	10.	1.	ug/l	86	88	61-116	1	30
Phenanthrene	< 10.	10.	1.	ug/l	90	92	68-111	2	30
Pyrene	< 10.	10.	1.	ug/l	94	94	68-114	1	30
Chrysene	< 10.	10.	1.	ug/l	90	90	70-111	0	30
Batch number: 051566050008A Lead	Sample number(s): 4532019-4532027 < 0.0010	0.0010	0.00018	mg/l	100		80-120		
Batch number: N051481AB Methyl Tertiary Butyl Ether	Sample number(s): 4532028 < 5.	5.	0.5	ug/l	97	94	77-127	3	30
Benzene	< 5.	5.	0.5	ug/l	103	98	85-117	5	30
1,2-Dichloroethane	< 5.	5.	1.	ug/l	105	100	77-132	5	30
Toluene	< 5.	5.	0.7	ug/l	94	89	85-115	5	30
Ethylbenzene	< 5.	5.	0.8	ug/l	93	88	82-119	6	30
Isopropylbenzene	< 5.	5.	1.	ug/l	92	87	80-120	6	30
Xylene (Total)	< 5.	5.	0.8	ug/l	93	89	83-113	5	30
Batch number: N051481AC Methyl Tertiary Butyl Ether	Sample number(s): 4532019-4532027 < 5.	5.	0.5	ug/l	97	94	77-127	3	30
Benzene	< 5.	5.	0.5	ug/l	103	98	85-117	5	30
1,2-Dichloroethane	< 5.	5.	1.	ug/l	105	100	77-132	5	30
Toluene	< 5.	5.	0.7	ug/l	94	89	85-115	5	30
Ethylbenzene	< 5.	5.	0.8	ug/l	93	88	82-119	6	30
Isopropylbenzene	< 5.	5.	1.	ug/l	92	87	80-120	6	30
Xylene (Total)	< 5.	5.	0.8	ug/l	93	89	83-113	5	30

Sample Matrix Quality Control

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>BKG</u>	<u>DUP</u>	<u>DUP</u>	<u>Dup RPD</u>
Batch number: 051460007A Ethylene dibromide	Sample number(s): 4532019-4532027 65		65-135		< 0.029	< 0.029	0 (1)	30
Batch number: 051566050008A Lead	Sample number(s): 4532019-4532027 101	99	75-125	2	< 0.0010	< 0.0010	25* (1)	20

*- Outside of specification

**-This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Langan

Group Number: 944981

Reported: 06/17/05 at 12:14 PM

Sample Matrix Quality Control

	MS	MSD	MS/MSD	RPD	BKG	DUP	DUP	Dup
	%REC	%REC	Limits	RPD	MAX	Conc	Conc	RPD
Analysis Name								Max
Batch number: N051481AB	Sample number(s): 4532028							
Methyl Tertiary Butyl Ether	90		69-134					
Benzene	99		83-128					
1,2-Dichloroethane	98		73-136					
Toluene	90		83-127					
Ethylbenzene	90		82-129					
Isopropylbenzene	89		81-130					
Xylene (Total)	89		82-130					
Batch number: N051481AC	Sample number(s): 4532019-4532027							
Methyl Tertiary Butyl Ether	90		69-134					
Benzene	99		83-128					
1,2-Dichloroethane	98		73-136					
Toluene	90		83-127					
Ethylbenzene	90		82-129					
Isopropylbenzene	89		81-130					
Xylene (Total)	89		82-130					

Surrogate Quality Control

Analysis Name: EDB in Wastewater

Batch number: 051460007A

1,1,2,2-
Tetrachloroethane

4532019	69
4532020	22*
4532021	70
4532022	72
4532023	69
4532024	70
4532025	63
4532026	63
4532027	64
Blank	79
DUP	57
LCS	85
LCSD	77
MS	58

Limits: 52-120

Analysis Name: PAHs in Water by GC/MS

Batch number: 05147WAD026

Nitrobenzene-d5

2-Fluorobiphenyl

Terphenyl-d14

4532019	88	89	136*
4532020	91	90	131
4532021	91	92	138*
4532022	86	91	137*

*- Outside of specification

**-This limit was used in the evaluation of the final result for the blank

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Langan

Group Number: 944981

Reported: 06/17/05 at 12:14 PM

Surrogate Quality Control

4532023	88	93	134
4532024	89	92	139*
4532025	90	90	136*
4532026	88	88	135
4532027	90	88	135
Blank	88	92	137*
LCS	87	91	134
LCSD	87	90	137*

Limits: 51-123 64-112 53-135

Analysis Name: UST-Waters by 8260B

Batch number: N051481AB

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
4532028	95	95	92	96
Blank	94	93	92	95
LCS	94	95	92	97
LCSD	93	93	92	96
MS	93	95	91	96

Limits: 81-120 82-112 85-112 83-113

Analysis Name: UST-Waters by 8260B

Batch number: N051481AC

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
4532019	87	91	94	95
4532020	88	91	94	95
4532021	86	92	94	96
4532022	88	92	94	96
4532023	87	91	95	96
4532024	88	91	93	95
4532025	87	90	93	95
4532026	87	89	94	95
4532027	88	89	93	95
Blank	88	91	93	95
LCS	94	95	92	97
LCSD	93	93	92	96
MS	93	95	91	96

Limits: 81-120 82-112 85-112 83-113

*- Outside of specification

**-This limit was used in the evaluation of the final result for the blank

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request / Environmental Services Chain of Custody



For Lancaster Laboratories use only
 Acct. # 10132 Group # 944981 Sample # 4532019-28 **COC #** 0087244

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: <u>Sun - Aquatone/Lancaster</u> Acct. #: _____ Project Name: <u>Sun - Philadelphia Refinery Air-Lo</u> Project Manager: <u>K. Martin / J. Hanne</u> P.O. #: _____ Sampler: <u>M. Brad Spence</u> Quote #: _____ Name of state where samples were collected: _____		2 Sample Identification Sample ID: _____ Date: _____ Time: _____		3 Time 1250 1310 1330 1345 1405 1420 1435 1445 1500		4 Matrix Soil <input checked="" type="checkbox"/> Water <input type="checkbox"/> Sediment <input type="checkbox"/> Other <input type="checkbox"/> Potential Contaminants: _____ Other: _____		5 Analytical Method 8200 BTEX, MIB, C, Cumene 8210 Fluorene, Phenanthrene, Pyrene, Chrysene, Naphthalene 8220 Dissolved Pb		6 For Lab Use Only FSC: _____ SCR #: <u>1203151</u>		7 Turnaround Time Requested (TAT) (please circle): <u>Normal</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: _____ Rush results requested by (please circle): _____ Phone _____ Fax _____ E-mail _____ Phone #: _____ Fax #: _____ E-mail address: _____		8 Data Package Options (please circle if required) QC Summary Type VI (Raw Data) SDG Complete? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Type I (Tier I) GLP Site-specific QC required? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Type II (Tier II) Other (If yes, indicate QC sample and submit triplicate volume.) Type III (NJ Red. Del.) Internal Chain of Custody required? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Type IV (CLP)	
B126-052405 B125-052405 B134D-052405 B131-052405 B117-052405 B115-052405 B116-052405 B48D-052405 B48-052405		5/24/05 1250 1310 1330 1345 1405 1420 1435 1445 1500		X X X X X X X X X X		8 8 8 8 8 8 8 8 8 8		2.2-3.7°C 5/25/09 R4		5/24/05 16:15 Emma Chellman 5/23/05 11:50 Aquatone 5/24/05 10:30 AT Fudge 5/25/05 9:55 Marwin M. Volante 5/25/05 17:20 Jessica Br...		5/23/05 7:15 5/24/05 11:50 5/24/05 16:30 5/25/05 9:55 5/25/05 17:20			

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
ug	microgram(s)	mg	milligram(s)
ml	milliliter(s)	l	liter(s)
m3	cubic meter(s)	ul	microliter(s)
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	B	Value is $<$ CRDL, but \geq IDL
B	Analyte was also detected in the blank	E	Estimated due to interference
C	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	S	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
P	Concentration difference between primary and confirmation columns $>25\%$	W	Post digestion spike out of control limits
U	Compound was not detected	*	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	+	Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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